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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,613	08/05/2003	Chiu-Tsung Huang	11039-US-PA	1612
31561	7590	10/04/2004	EXAMINER	
JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE 7 FLOOR-1, NO. 100 ROOSEVELT ROAD, SECTION 2 TAIPEI, 100 TAIWAN			TRAN, TAN N	
			ART UNIT	PAPER NUMBER
			2826	
DATE MAILED: 10/04/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/604,613	<b>Applicant(s)</b> HUANG ET AL.	
	<b>Examiner</b> TAN N TRAN	<b>Art Unit</b> 2826	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on amendment filed on 08/19/04.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Information Disclosure Statement**

1. If applicant is aware of any relevant prior art, he/she requested to cite it on form PTO-1449 in accordance with the guidelines set forth in M.P.E.P. 609.

### **Specification**

2. The title of the invention is still not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### **Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 13-19 stand rejected under 35 U.S.C. 102(a) as being anticipated by Lee et al. (2003/0042531).

With regard to claims 13,14, Lee et al. discloses a memory having an insulation layer 22 disposed on the substrate layer 10; a silicon stripe layer 26 disposed on the insulation layer 22; a first control gate 36A and second control gate 36B disposed respectively on sidewalls of the silicon stripe layer 26; the source and drain regions formed in the silicon stripe layer 26 beside both sides of the first control gate 36A and second control gate 36B; oxide/nitride/oxide layer (42,40,44) disposed between the first control gate 36A and the silicon stripe 26 and between the second control gate 36B and silicon stripe 26. (Note see previous attachment #1, lines 3,4, paragraph 0058, page 2, fig. 6d of Lee et al.). It is inherent that oxide/nitride/oxide material (42,40,44) to be a silicon oxide/silicon nitride/silicon oxide mater because Lee et al's the structure is SONOS in order to obtain high K dielectric constant.

With regard to claims 15-19 Lee et al. discloses a memory having an insulation layer 22 disposed on the substrate layer 10; a silicon stripe layer 26 disposed on the insulation layer 22; a first control gate 36A and second control gate 36B disposed respectively on sidewalls of the silicon stripe layer 26; the source and drain regions formed in the silicon stripe layer 26 beside both sides of the first control gate 36A and second control gate 36B; a nitride layer 40 serves as a charge trapping layer disposed between the first control gate 36A and the silicon stripe layer 26 and between the second control gate 36B and the silicon stripe layer 26; a first dielectric layer 42 disposed between the nitride layer 40 and the silicon stripe layer 26; and a second dielectric layer 44 disposed between the nitride layer 40 and the second control gate 36B. (Note see attachment #1, lines 3,4, paragraph 0058, page 2, fig. 6d of Lee et al.). It is inherent that oxide/nitride/oxide material (42,40,44) to be a silicon oxide/silicon nitride/silicon oxide mater because Lee et al's the structure is SONOS in order to obtain high K dielectric constant.

### **Response to Arguments**

4. Applicant's arguments filed 08/19/04 have been fully considered but they are not persuasive.

It is argued, at pages 7,8 of the remarks, that "Lee substantially fails to teach or disclose a multi-level memory cell comprising at least a first control gate and a second control gate disposed respectively on sidewalls of the semiconductive strip"; "nowhere in Lee there is any disclosure describing the first control gate 36A and the second control gate 36B". However, see previous attachment #1, fig. 6d of Lee et al. do show a first control gate 36A and second control gate 36B disposed respectively on sidewalls of the silicon stripe layer 26. Moreover, in response to applicant's arguments, the recitation "a multi-level memory cell" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Since claims 13,15 do recite at least a first control gate and a second control gate disposed respectively and separately on sidewalls of the semiconductive strip Applicant's claims 1 and 2 do not distinguish over Lee et al reference.

**Conclusion**

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


6. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tan Tran whose telephone number is (571) 272-1923. The examiner can normally be reached on M-F 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for after final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

TT

Sep 2004

  
**Minhloan Tran**  
**Primary Examiner**  
**Art Unit 2826**